

CLAIMS

1. A detecting element for detecting a plurality of different substances in a specimen, characterized by comprising:

5 a channel provided on a substrate, which is capable of forming a plurality of layers of flow of a fluid; and

a plurality of different substance trapping portions provided in the channel, for trapping the
10 plurality of different substances in the specimen, respectively, wherein:

the plurality of different substance trapping portions are provided separately in accordance with the plurality of layers of flow of a fluid to be
15 formed; and

the plurality of different substance trapping portions are each arranged to acquire independent information on each of the substances in the specimen through an action between the fluid and the trapped
20 substance.

2. A detecting element according to claim 1, characterized by further comprising a detecting unit for detecting the information.

3. A detecting element according to claim 1 or
25 2, characterized in that:

the plurality of different substances in the specimen each have a label; and

the fluid flowing along the plurality of layers of flow comprises a fluid acting on the label to discharge an active product.

4. A detecting element according to claim 3,
5 characterized in that the label comprises a substance having a catalytic action, a substance having electrochemiluminescence, or a fluorescent substance.

5. A detecting element according to claim 4,
wherein the substance having a catalytic action is
10 selected from glucose oxidase, choline oxidase, lactose oxidase, and horseradish peroxidase.

6. A detecting element according to claim 1,
characterized in that an antibody is immobilized on
each of the substance trapping portions.

15 7. A detection method for detecting a plurality of different substances in a specimen, characterized by comprising the steps of:

introducing the specimen into a channel having
a plurality of different substance trapping portions
20 for specifically trapping the plurality of different substances, respectively, to trap the substances in the substance trapping portions;

forming a plurality of layers of flow of a
fluid in the channel; and

25 switching and passing the fluid forming the plurality of layers of flow, to acquire independent information on each of the substances in the specimen

through an action between the fluid and the trapped substance.

8. A detection method according to claim 7,
wherein the plurality of different substances in the
5 specimen each have a label.

9. A detection method according to claim 8,
wherein the label employs a substance having a
catalytic action, a substance having
electrochemiluminescence, or a fluorescent substance.

10 10. A detection method according to claim 7,
wherein the plurality of different substances in the
specimen are selected from a biological substance,
allergen, bacteria, and virus.

11. A detection method according to claim 10,
15 wherein the biological substance is selected from a
protein, a nucleic acid, and a sugar chain.